

ABSTRACT

A rotary fluid machine including a rotation mechanism (20) including: a cylinder (21) having an annular cylinder chamber (50); an annular piston (22) which is contained in the cylinder chamber (50) to be eccentric to the cylinder (21) and divides the cylinder chamber (50) into an outer working chamber (51) and an inner working chamber (52); and a blade (23) which is arranged in the cylinder chamber (50) to divide each of the working chambers into a high pressure region and a low pressure region, the cylinder (21) and the piston (22) make relative rotations. The width T1 of the cylinder chamber (50) is varied along the circumference of the cylinder chamber (50) such that the gap between the wall surface of the cylinder (21) and the wall surface of the piston (22) is kept to a predetermined value during the rotations. Further, the width T2 of the piston (22) is varied along the circumference of the piston (22) such that the gap between the wall surface of the cylinder (21) and the wall surface of the piston (22) is kept to a predetermined value during the rotations.